AMENDMENTS TO THE DRAWINGS

Replacement drawing sheets for Figures 1c, 6c and 10c are enclosed, which include the complete sequences for Figures 1c, 6c and 10c.

REMARKS

Claims 1-31 were pending. All pending claims were rejected in the Office Action. In view of the foregoing amendments and arguments below, Applicants respectfully request withdrawal of all rejection upon reconsideration.

Preliminarily, there were several formalities raised in the Office Action that have been attended to herein. The specification has been amended to recite the application from which the present application is a continuation, and to recite that that application is now U.S. Pat. No. 6,608,037. The specification has also been amended to include the SEQ ID NOs of the sequences presented in the figures.

Upon reviewing the specification for amending the figure descriptions to include the SEQ ID NOs, the Applicants discovered that the last line of the sequences in Figures 1c and 6c had been inadvertently left off due to a copying. Corrected versions of Figures 1c and 6c are enclosed. The correct figures were present in the parent application, Application Serial No. 09/798,128. That application was incorporated by reference in its entirety in the transmittal accompanying the present application (copy enclosed). Applicants also discovered that two of the sequences in the specification had the wrong SEQ ID NOs. Those have been corrected herein as well.

The Office Action raised several objections to claims 4 and 29-31. Those objections have been addressed by amendment as suggested by the Office. As for the objections to claims 20-22, 24, 25, 27, and 28 as depending from succeeding claims, the Applicants note that the Office graciously stated that correction was not required in response to this Office Action, but will require reordering before the application is allowed.

Rejections under 35 U.S.C. § 112, first paragraph

Claims 1, 2, and 4-31 were rejected under 35 U.S.C. § 112, first paragraph, as allegedly nonenabled. Claim 1 has been canceled herein without prejudice and to advance prosecution. The Office's position is that, while the specification is enabling for making and using constructs comprising an expressible gene that is useful for treatment of **cancer** that is characterized by deregulation of the Wnt signaling pathway, or the presence of TCF/β-catenin heterodimers, and for

the methods of treatment of such cancers, it is not enabling for making and using constructs for the treatment of diseases so characterized other than cancer. Applicants respectfully disagree.

The Office cited the "goal" of the invention, i.e., the effective treatment of cancer associated with Wnt signaling deregulation, for alleged support. The Office then quoted the specification for the disclosure that the therapeutic gene is only induced when TCF/β-catenin heterodimers are present, and that cells which become cancerous due to deregulation of the Wnt signaling pathway have the required TCF/β-catenin heterodimers. To the extent the Office is of the view that the TCF/β-catenin heterodimers are only present in cancer cells, this view is incorrect.

As is apparent from the attached review, Moon et al., "WNT and β-catenin Signalling: Diseases and Therapies," *Nature Reviews, Genetics*, 5:689-699, September, 2004, (copy enclosed) TCF/β-catenin heterodimers are present in cells in other disease states as well. See, for example, Table 1 of the article which lists elevated β-catenin levels in aggressive fibromatosis and pulmonary fibrosis. References from 2004 and 2003, respectfully are cited: Cheon et al., *PNAS*, 99(10):6973-6978, May 14, 2002 and Chilosi, et al., *American Journal of Pathology*, 162(5):1495-1502, May, 2003 (copies enclosed). Pulmonary fibrosis is a relatively common, incurable and often fatal disease (killing about the same number of Americans as breast cancer, apparently). Currently, the only real treatment is lung transplantation. As Cheon et al. also reports, elevated β-catenin levels are also implicated in hyperproliferative wound disorders. See also the discussion on page 693 of tuberous sclerosis, i.e., the formation of tumor-like lesions in organs, in Moon et al. Mak et al., *J. Biological Chemistry*, 278(8):5947-5951, 2003 (copy enclosed) is cited in support. Indeed, it has been reported that β-catenin levels are elevated in cells infected with HIV-1, the major causative agent of AIDS. Besnard-Guerin et al, *J. Biological Chemistry*, 279(1):788-795, 2004 (copy enclosed). As should be apparent from the foregoing, elevated β-catenin levels are responsible for a variety of diseases other than cancer.

It is of no moment to enablement that these references post-date the earliest effective filing date of the present application. Applicants have disclosed how to make and use the constructs claimed, as well as how to practice the methods claimed. The claims are not directed to simply **any** disease. The claims recite that the diseases are characterized by the presence of TCF/β-catenin

heterodimers. The claims also recite that the constructs comprise TCF binding elements to which the expressible gene is operably linked. As disclosed upon page 3, line 31, through page 4, line 6, of the application as filed, the TCF/β-catenin heterodimers bind to the TCF binding element. As the Office acknowledged in the Office Action, expression of the therapeutic gene is induced when the TCF/β-catenin heterodimers are present. Thus, if the disease results in TCF/β-catenin heterodimers being present, it is covered by the claims. As diseases are identified which result in the presence of TCF/β-catenin heterodimers, they too can be treated according to Applicants' invention without undue experimentation. The Office has provided no evidence to the contrary.

The Office also stated that the claims cover genes that have no use in the treatment of cancer, and that the specification does not teach how to use such genes in the treatment of cancer. The Office has unnecessarily read a limitation into the claims, i.e., that they are limited to the treatment of cancer, and then rejected the claims as non-enabled as reading on expressible genes that are not so limited. This reading of a limitation into the claims is inappropriate.

> When analyzing the enabled scope of a claim, the teachings of the specification must not be ignored because claims are to be given their broadest reasonable interpretation that is consistent with the specification. "That claims are interpreted in light of the specification does not mean that everything in the specification must be read into the claims." *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 957, 220 USPQ 592, 597 (Fed. Cir. 1983), *cert. denied,* 469 U.S. 835 (1984).

MPEP 2164.08. The Office also argues that the specification provides no guidance or working examples on using the claimed nucleic acid constructs for treating any disease other than cancer, and no guidance on using genes other than those disclosed. Such is not required.

> In *In re Goffe*, 542 F.2d 564, 567, 191 USPQ 429, 431 (CCPA 1976), the court stated: [T]o provide effective incentives, claims must adequately protect inventors. To demand that the first to disclose shall limit his claims to what he has found will work or to materials which meet the guidelines specified for "preferred" materials in a process such as the one herein involved would not serve the constitutional purpose of promoting progress in the useful arts.

Id.

Applicants respectfully request that this rejection be withdrawn.

Rejections under 35 U.S.C. § 112, second paragraph

Claims 7, 15, and 20 were rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite. More specifically, the Office alleged lack of antecedent basis for various limitations in the claims. The claims have been amended herein as suggested by the Office. Applicants respectfully request that this rejection be withdrawn.

Rejections for double patenting

Claim 3 was rejected under 35 U.S.C. §101 as allegedly claiming the same invention as that of claim 1 of U.S. Patent No. 6,608,037. Applicants have canceled claim 3 herein. This rejection should be withdrawn.

Claims 1-31 were rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over claims 1-29 of U.S. Patent No. 6,608,037. Without conceding the correctness of this rejection, Applicants advise that they will file a terminal disclaimer upon an indication of allowable subject matter.

CONCLUSION

Applicants respectfully submit that the current application is in condition for allowance and request early notification of the same.

Respectfully submitted,

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